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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,276	04/08/2004	Ming-Kuen Lin	10114021	9390
34283	7590	07/19/2005	EXAMINER	
QUINTERO LAW OFFICE 1617 BROADWAY, 3RD FLOOR SANTA MONICA, CA 90404			CHEN, WEN YING PATTY	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H:A

<b>Office Action Summary</b>	<b>Application No.</b> 10/821,276	<b>Applicant(s)</b> LIN ET AL.	
	<b>Examiner</b> Wen-Ying P. Chen	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Drawings*

Figure 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Davenport et al. (US 5398171).

With respect to claim 1: Davenport et al. disclose in Figure 2 an optical system comprising: a light source (element 12) for emitting lights along a first direction to define an optical axis (element 34); and a light pipe (element 16), non-coaxially disposed from the light source and transmitting lights with a virtual arc array (element 22), wherein the light pipe

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deviates from the optical axis by a predetermined distance in a second direction perpendicular to the first direction, so that the lights with the virtual arc array is asymmetrical.

As to claims 8 and 9: Davenport et al. disclose in Figure 2 that the light pipe deviates oppositely from the light source such that the direction of deviation corresponds to a non-coplanar axis direction as to where the optical axis lies, i.e. Z-axis.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davenport et al. (US 5398171) in view of Okamori et al. (US 2002/0008791).

With respect to claim 3: Davenport et al. disclose all of the limitations set forth in claim 1, but fail to specifically disclose that the optical system further comprising a convergent lens. However, Okamori et al. disclose in Figure 1 an optical system comprising a convergent lens (elements 1 and 2) positioned between the light source (element 10) and the light pipe (element 3) in order to focus the lights from the light source to the light pipe.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct an optical system as taught by Davenport et al. wherein the system further comprises a convergent lens as taught by Okamori et al. since Okamori et al. teach that the converging means help to form a converged image for directing the illumination path (Abstract).

As to claim 4: Okamori et al. further disclose in Figure 1 that the light pipe comprises a lens module (element 4) for receiving focused lights transmitted from the convergent lens (elements 1 and 2), and outputting the focused lights uniformly (Paragraph 0083).

As to claim 5: Davenport et al. disclose all of the limitations set forth in claim 1, but fail to specifically disclose that the optical system further comprising a relay lens module and a projection plane. However, Okamori et al. disclose in Figure 1 an optical system comprising a relay lens module (element 4) and a projection plane (element 5), wherein the relay lens module relays the lights from the light pipe to the projection plane (Paragraph 0083).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct an optical system as taught by Davenport et al. wherein the system further comprises a relay lens module and a projection plane as taught by Okamori et al. since Okamori et al. teach that the relay lens module acts to transmit a light from the light pipe uniformly onto the projecting plane for efficiently illuminating the projecting plane (Paragraph 0083).

As to claim 6: Okamori et al. further disclose in Figure 1 that the relay lens module comprises a spherical lens (element 42) and an aspherical lens (element 43).

As to claim 7: Okamori et al. disclose in Paragraphs 0036 and 0068 that the projection display device is a DMD projector, which is also called the DLP projector.

#### ***Allowable Subject Matter***

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior arts cited fail to specifically disclose that the predetermined distance is substantially between 0.3 and 0.7 mm.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Ying P. Chen whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.

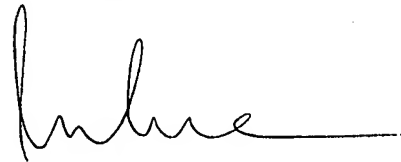
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WPC  
7/14/05

Wen-Ying P Chen  
Examiner  
Art Unit 2871



**DUNG T. NGUYEN**  
**PRIMARY EXAMINER**